

# 15.02 Earnings Per Share: Diluted

## 2 - The If-Converted Method

The calculation of **diluted EPS** (assume anyone who “*could convert*” does so) for a company with **convertible Preferred stock or Convertible Bonds** starts with the computation just discussed, which is called **basic EPS**. For convertible securities, the following adjustments are made in the calculation:

- **Numerator** – earnings are increased by the dividends or after-tax interest expense that would not have been due if the securities had been converted to common stock at the beginning of the year.
- **Denominator** – shares are increased by the additional number of common shares that would have been outstanding if the securities had been converted. The convertible preferred stock or convertible debt is assumed to have been converted at the beginning of the period, or at the time of issuance, whichever is later. No weighting is “required”.

If the calculation results in an EPS number which is higher than the basic EPS number, then the security is **anti-dilutive** and not included in the reported diluted EPS. To determine whether or not an item is anti-dilutive, each item is considered separately in sequence from most to least dilutive. One would normally consider options and warrants first.

### Complex (Diluted) Capital Structure (Could convert)

**Net Income Available to C/S**

- + (2) Preferred Dividends (not net of tax)
- + (2) Interest expense saved from convertible Bonds (net of tax)
- + (3) \$0 (from Treasury stock)

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- (1) Weighted avg. # C/S outstanding (dividends and splits – Retroactive)
  - + (2) # of shares convertible security is converted into for both Preferred stock and convertible bonds (not weighted)
  - + (3) Incremental # of C/S outstanding from Treasury stock method at average market price. (Not weighted)

For example, assume that a company reporting \$932 net income for the year has the following capital structure, which did not change during the year:

Preferred stock, \$100 par, 8% cumulative, 4 shares, each convertible into 10 shares of common stock	\$400
Common stock, \$1 par, 100 shares	100

To calculate **basic EPS**:

$$\text{Earnings} = \text{Net income} - \text{PS dividends} = \$932 - \$32 = \$900$$

$$\text{Shares} = 100$$

$$\text{Basic EPS} = \$900 / 100 = \$9.00$$

If the preferred shares had been converted at the beginning of the year, the \$32 in preferred dividends would not have been owed and there would have been  $4 \times 10 = 40$  additional common shares.

To calculate **diluted EPS**:

$$\text{Earnings} = \$900 + \$32 = \$932$$

$$\text{Shares} = 100 + 40 = 140$$

$$\text{Diluted EPS} = \$932 / 140 = \$6.66$$

The **conversion of a bond** ("if converted method") requires considering the tax effect, since the reduction of interest expense is accompanied by an increase in taxable income. It is assumed that the conversion occurred at the *beginning of the earliest period reported* (or at the time of *issuance*, if later).

For example, assume a client with \$800 of net income and an effective tax rate of 30% had the following capital structure throughout the year:

6% Convertible bond, \$1,000 face value, convertible into 20 shares of common stock	\$1,000
Common stock, \$1 par, 200 shares	200

Basic EPS is computed as follows:

$$\text{Earnings} = \$800$$

$$\text{Shares} = 200$$

$$\text{Basic EPS} = \$800 / 200 = \$4.00$$

The conversion of the bonds would have eliminated the  $\$1,000 \times 6\% = \$60$  in interest expense, but would have increased taxes by  $\$60 \times 30\% = \$18$ , so the net savings is only  $\$60 - \$18 = \$42$ .

Diluted EPS is computed as follows:

$$\text{Earnings} = \$800 + \$42 = \$842$$

$$\text{Shares} = 200 + 20 = 220$$

$$\text{Diluted EPS} = \$3.83$$